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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/538,479

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Lothar Alwin Paul

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NIXON & VANDERHYE, PC

901 NORTH GLEBE ROAD, 11TH FLOOR

ARLINGTON, VA 22203

EXAMINER

KLEIN, GABRIEL J

ART UNIT

PAPER NUMBER

3641

MAIL DATE

DELIVERY MODE

01/08/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/538,479

Applicant(s)

PAUL ET AL.

Examiner

GABRIEL J. KLEIN

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 11-14 is/are rejected.
- 7) ☒ Claim(s) 7-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-893)
Paper No(s)/Mail Date June 7, 2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 recites the limitation "the cradle" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

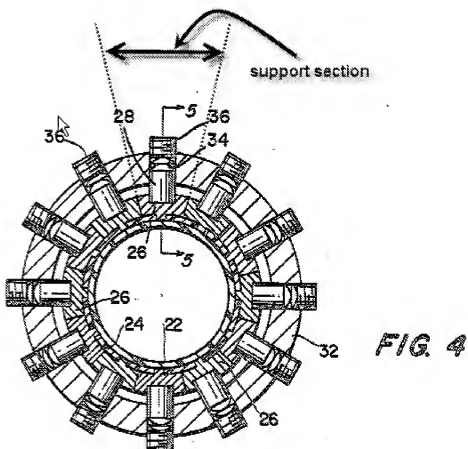
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Peritt (4168049).

In reference to claim 1, Peritt discloses a gun tube support assembly comprising:

- a plurality of support sections arranged annularly around a gun tube (see marked-up figure 4 below), each including:
 - o a bush housing (figure 4, combination of elements 32 and 36);

- a cradle bush for the bush housing that is capable of receiving and supporting the gun tube (figure 4, combination of elements 26 and 28); and
- a damping means sandwiched between the bush housing and cradle bush that is capable of absorbing and damping kinetic energy emanating from the gun tube during firing thereof (figure 4, element 34).



In reference to claim 2, Peritt discloses that the damping means is a resilient body selected from the group consisting of a rubber pad, a spring, and a pneumatic or hydraulic cushion (column 4, lines 56-57).

In reference to claim 12, Peritt discloses that the cradle bush is biased in the direction of the gun tube such that it is capable of keeping the cradle bush in contact with the gun tube and such that it is capable of allowing for thermal expansion of the gun tube (figure 4; and column 3, lines 41-55; and column 4, lines 31-47).

In reference to claim 13, Peritt discloses a cradle that is capable of carrying a gun tube including a gun tube support assembly according to claim 1 (column 3, lines 66-68, to column 4, lines 1-2).

In reference to claim 14, Peritt discloses a gun provided with a gun tube support assembly according to claim 1 (column 2, lines 65-67).

Claims 1, 2, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Enlund et al (3606218).

In reference to claim 1, Enlund et al discloses a gun tube support assembly comprising:

- a plurality of support sections arranged annularly around a gun tube (figure, top and bottom halves), each including:
 - o a bush housing (figure, element 13 for the top half, element 12 for the bottom half);
 - o a cradle bush for the bush housing that is capable of receiving and supporting the gun tube (figure, element 18); and

- o a damping means sandwiched between the bush housing and cradle bush that is capable of absorbing and damping kinetic energy emanating from the gun tube during firing thereof (figure, element 19).

In reference to claim 2, Enlund et al teaches that the damping means is a rubber pad (column 2, lines 45-46).

In reference to claim 5, Enlund et al teaches that each bush housing comprises a curved bush housing plate having an inner surface capable of abutting the resilient body (figure).

In reference to claim 6, Enlund et al teaches that end flanges that are capable of connecting the bush housing to a cradle of a gun are disposed towards opposite ends of the bush housing plate (figure, elements 16).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peritt or Enlund et al. Peritt and Enlund et al both disclose the claimed invention, including wherein said damping means is a rubber pad, but fails to disclose what kind of rubber the rubber pad is made out of. However, it would have been obvious to one having ordinary skill in the art to use a relatively high-temperature silicon rubber for the rubber

pad, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peritt in view of Thomas (4125052). Peritt teaches the claimed invention except of wherein the rubber pad includes a plurality of protrusions extending from a face of the pad for accommodating compression of the pad. Thomas teaches that it is known to provide an elastomeric clamping device including a plurality of protrusions extending from a face of said clamping device in order to accommodate compression of the clamping device (column 2, lines 41-45). It would have been obvious to one having ordinary skill in the art to provide the rubber pad as taught by Peritt with a plurality of protrusions extending from a face of the pad in order to facilitate compression of the pad such that only negligible stresses are induced in the gun tube due to constraint of said gun tube within said gun tube support assembly. It should be appreciated that Peritt discloses that it is important for the damping means to only exert negligible stresses to the gun tube (column 3, lines 48-52), and that a person of ordinary skill in the art would recognize that a plurality of protrusions extending from a face of said rubber pad would help to lower the stresses acting on said gun tube. Further, a person of ordinary skill in the art could carry out such a modification using known methods in a manner that would yield predictable results.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peritt in view of Franchino et al (5703318). Peritt discloses the claimed invention including

wherein there are two to six support sections arranged annularly around the gun tube (see marked-up figure 4 above), but Peritt does not explicitly state that the support sections are received in an opening in a cradle. Peritt does disclose that said support sections can be welded or mechanically attached to a mounting tripod, pod, aircraft rack, or other stable launching platform (column 3, lines 66-68, to column 4, lines 1-2). Franchino et al teaches that it is known to mount a gun tube support assembly within an opening in a cradle (figures 3 and 4, element 24 and 30; and column 3, lines 40-60) in order to provide rotary elevation adjustment for a gun tube mounted within said gun tube support assembly (column 3, lines 32-34). Thus, it would have been obvious to one having ordinary skill in the art to mount the gun tube support assembly as taught by Peritt within an opening in a cradle in a manner consistent with the teachings of Franchino et al in order to provide rotary elevation adjustment to a gun tube mounted within said gun tube support assembly.

Allowable Subject Matter

Claims 7-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GABRIEL J. KLEIN whose telephone number is (571)272-8229. The examiner can normally be reached on Monday through Friday 7:15 am to 3:45 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GJK

/Michael J. Carone/

Supervisory Patent Examiner, Art Unit 3640